REMARKS

Applicants have carefully reviewed the non-final Office mailed December 2, 2010. To better distinguish their invention from the art of record, applicants have amended claims 1, 8, and 14 to incorporate the features of claim 2 now cancelled. Applicants have also amended claim 15 to now depend from claim 14 rather from non-existent claim 20. Following the claim amendments and claim cancellation, claims 1 and 3-15 remain in this application. Applicants request reconsideration of the claim rejections in view of the claim amendments and accompanying remarks.

Claim Objection

Claim 15 stands objected to as depending from non-existent claim 20. Applicants have now amended claim 15 to depend from claim 14, thereby obviating the informality of claim 15.

35 U.S.C. § 102(a) Rejection of Claims 1-4, 8, and 11

Claims 1-4, 8, and 11 stand rejected under 35 U.S.C. § 102(a) as anticipated by the publication, C. Gomila and A. Kobilansky, *SEI Message for Film Grain Encoding,* JVT of ISO/IEC MPEG and ITU-T VCEG, Geneva, Switzerland, May 2003, pages 1-14 (XP-002308742). In this regard, the examiner contends that the Gomila et al. publication teaches applicants' features of: (a) decoding the video stream; and (b)adding noise to at least one pixel in a picture in the video stream following decoding in an amount correlated to luminance information of at least a portion of a current picture, as recited in claim 1. Further, the examiner has relied on other portions of the Gomila publication to anticipate claims 2-4, 8, and 11.

Applicants has amended claims 2 and 8 to incorporate the feature of

generating <u>random</u> noise for addition to at least one pixel in a decoded picture
in an amount correlated to correlated to luminance information of at least a
portion of a current picture <u>using a factor dependent on the temporal
correlation of the current picture image with one of a previously displayed or
decoded picture</u>

As discussed below, the inclusion of this feature (previously recited in now-

cancelled claim 2) patentably distinguishes independent claims 1 and 8, and the claims

that depend therefrom, over the art of record.

The Gomila and Kobilansky publication describes a technique for simulating film

grain in accordance with a film grain simulation model specified in a supplemental

enhancement (SEI) message accompanying the encoded image. In particular, Section 4.1

of the Gomila and Kobilansky publication cited by the examiner states the following:

In a first approach, we propose to use second order auto regression to model
spatial correlation and first order regression to model cross-color and
temporal correlations.

Applicants note that the foregoing statement in Section 4.1 of the Gomila and

Kobilansky publication constitutes the only mention of the term "temporal correlation" in

this reference. By itself, this statement in the Gomila and Kobilansky publication

regarding "temporal correlation" provides no description as to what two quantities are

temporally correlated. In particular, the Gomila and Kobilansky publication says nothing

regarding the temporal correlation of a current picture with one of a previously displayed

or decoded picture, let alone the generation of noise using a factor dependent on such

temporal correlation as recited in applicants' claims 1 and 8.

With regard to anticipation, the Federal Circuit has mandated that "Anticipation

requires the presence in a single prior art reference disclosure of <u>each and every element

of the claimed invention, arranged as in the claim</u>" (*Lindemann Maschinenfabrik GmbH

v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1983))

(emphasis added). To establish a *prima facie* case of anticipation for claims 1 and 8, the

examiner must demonstrate that the Gomila and Kobilansky publication defines temporal

correlation as the correlation of a current picture with one of a previously displayed or

decoded picture. However, as discussed above, the Gomila and Kobilansky publication contains no such disclosure. Thus, in the absence of any such disclosure in the Gomila and Kobilansky publication, the examiner has not established a *prima facie* case of obviousness, warranting withdrawal of the 35 U.S.C. § 102(a) of claims 1, 4, 8, and 11.

35 U.S.C. § 103(a) Rejection of Claims 5, 6, 13, and 14

Claims 5, 6, 13, and 14 stand rejected under 35 U.S.C. § 103(a) as obvious over the publication by Cristina Gomila, entitled *SEI Message for Film Grain Encoding: syntax and results"*, JVT of ISO/IEC MPEG and ITU-T VCEG, September 2003, pages 1-11 (XP-002308743), in view of the Gomila and Kobilansky publication discussed previously with respect to the 35 U.S.C. § 102(a) rejection of claims 1-4, 8, and 11. Applicants respectfully traverse the rejection in view of the amendments to claims 1, 8, and 14.

As discussed previously, the Gomila and Kobilansky publication describes a technique for simulating film grain in accordance with a film grain simulation model specified in a supplemental enhancement (SEI) message accompanying the encoded image.

In connection with claims 5, 6, and 13, the examiner acknowledges that the Gomila and Kobilansky publication says nothing about the specific features recites in each of these claims. In particular, the examiner admits that Gomila and Kobilansky says nothing about establishing the correlation factor of claim 6, nor the noise adjustment of claim 6 nor the second picture store of claim 13. To remedy the deficiencies of the Gomila and Kobilansky, the examiner relies on the Gomila publication *"SEI Message for Film Grain Encoding: syntax and results"* for the features in these claims

With regard to claim 14, the examiner acknowledges that the Gomila and Kobilansky publication does not disclose generating noise in an amount correlated to the additive noise in at least one pixel of a prior picture. The examiner relies on the Gomila publication to teach such noise correlation.

The applicants have discussed the Gomila and Kobilansky publication at length above in connection with the 35 U.S.C. § 102(a) rejection of claims 1-4, 8 and 11. Applicants will not repeat that discussion for the sake of brevity, but reiterate that the Gomila and Kobilansky reference says nothing about generating random noise using a factor dependent on the temporal correlation of a current picture with one of a previously displayed or decoded picture as recited in applicants' claims 1, 8 and 14.

The Gomila publication describes specific syntax in connection with the SEI message for conveying film grain information separate from the coded image. However, the Gomila publication says nothing whatsoever regarding temporal correlation, let alone the generation of noise using a factor dependent on the temporal correlation of a current picture with one of a previously displayed or decoded picture, as recited in applicants' claims.

Given that neither the Gomila and Kobilansky publication nor the Gomila publication teach applicants' feature of generating noise using a factor dependent on the temporal correlation of a current picture with one of a previously displayed or decoded picture, the combination of references would not teach all of the features of amended claims 1, 8 and 14. Claims 5 and 6 depend from claim1, whereas claim 13 depends from claim 8. Therefore, claims 5, 6, and 13 all incorporate by references features not disclosed by the combination of the Gomila and Kobilansky and the Gomila publications. Therefore, claims 5, 6, 13, and 14 are non-obvious in view of and patentable over the art of record. Applicants respectfully request withdrawal of the 35 U.S.C. § 103(a) rejection of these claims.

35 U.S.C. § 103(a) Rejection of Claims 7, 9, and 10
35 U.S.C. § 103(a) Rejection of Claim 15

Claims 7, 9, 10, and 15 stand rejected under 35 U.S.C. § 103(a) as obvious over the Gomila and Kobilansky publication discussed above with respect to the 35 U.S.C. § 102(a) rejection of claims 1-4, 8 and 11, in view of US Patent 7,773,741 in the name of Wilf LeBlanc et al..

In rejecting applicants' claims, the examiner contends that the Gomila and Kobilansky publication teaches all of the features of claims 7, 9, 10, and 15 except for the use of an Infinite Impulse Response (IIR) filter. To cure that deficiency, the examiner has cited the Leblanc et al. patent. Applicants respectfully traverse the rejection.

The applicants have discussed the Gomila and Kobilansky publication at length above in connection with the 35 U.S.C. § 102(a) rejection of claims 1-4, 8 and 11. Applicants will not repeat that discussion for the sake of brevity, but reiterate that the Gomila and Kobilansky reference says nothing about generating random noise using a factor dependent on the temporal correlation of a current picture with one of a previously displayed or decoded picture as recited in applicants' claims 1, 8 and 14 from which claim 7, 9-10 and 15 depend respectively.

The Leblanc et al. patent concerns a signal processing system which discriminates between voice signals and data signals modulated by a voice band carrier. The signal processing system of LeBlanc et al. includes a voice exchange, a data exchange and a call discriminator, with the voice exchange capable of exchanging voice signals between a switched circuit network and a packet based network.

The LeBlanc et al. patent says nothing about temporal correlation, let alone nothing about generating random noise using a factor dependent on the temporal correlation of a current picture with one of a previously displayed or decoded picture as recited in applicants' claims 1, 8, and 14. In this regard, the LeBlanc et al. patent adds nothing to the Gomila and Kobilansky publication.

Given that neither the Gomila and Kobilansky publication nor the LeBlanc et al. patent teaches all of the features of applicants' claims 1, 8, and 14, then claims 7, 9-10 and 15, which depend therefrom, respectively, patentably distinguish over the art of record. Applicants respectfully request withdrawal of the 35 U.S.C. § 103(a) rejection of claims 7, 9-10, and 15.

35 U.S.C. § 103(a) Rejection of Claim 12

Claim 12 stands rejected under 35 U.S.C. § 103(a) as obvious over the Gomila publication *"SEI Message for Film Grain Encoding: syntax and results,* in view of the publication by Gisle Bjontegaard entitled *Addition of 'Comfort Noise as Post Processing,* ITU - Telecommunications Standardization Sector, Document Q15-B-15, Second Meeting: Sun River, Oregon, 8-11 September 1997. Applicants respectfully traverse this rejection.

In rejecting claim 12, the examiner contends that the Gomila publication *"SEI Message for Film Grain Encoding: syntax and results* teaches all of the features of claim 12, except for the bit stream information comprising quantization information. The examiner relies on the Bjontegaard publication as teaching that bit stream information can comprise quantization information.

Assuming arguendo, the examiner has correctly characterized the Bjontegaard publication, the combination of this reference with the Gomila publication *"SEI Message for Film Grain Encoding: syntax and results*, would not teach all of the features of claim 8 from which claim 12 depends.

As discussed previously, claim 8 recites a decoder arrangement which includes a noise generator for generating random noise using a factor dependent on the temporal correlation of a current picture with one of a previously displayed or decoded picture. The Gomila publication *"SEI Message for Film Grain Encoding: syntax and results* says nothing about temporal correlation, let alone the feature of a noise generator for generating random noise using a factor dependent on the temporal correlation of a current picture with one of a previously displayed or decoded picture. Likewise, the Bjontegaard publication is silent in this regard. Thus, the combination of the Gomila publication *"SEI Message for Film Grain Encoding: syntax and results* and the Bjontegaard publication fail to teach all of the features of claim 8, and claim 12 that depends therefrom.

To the extent that the examiner intended to rely on the Gomila and Kobilansky publication rather than the Gomila publication *"SEI Message for Film Grain Encoding: syntax and results*, the result would be no different. As discussed above, the Gomila and Kobilansky publication, like the Gomila publication *"SEI Message for*

Film Grain Encoding: syntax and results, fails to teach the feature of generating random noise using a factor dependent on the temporal correlation of a current picture with one of a previously displayed or decoded picture. Thus, regardless of which Gomila publication the examiner chooses to rely, neither reference, nor their combination with the Bjontegaard publication, would teach all of the features of applicants' claim 8, nor claim 12 that depends therefrom. For this reason, applicants respectfully request withdrawal of the 103a rejection of claim 12.

Conclusion

        In view of the foregoing, applicants solicit entry of this amendment and allowance of the claims. If the Examiner cannot take such action, the Examiner should contact the applicant's attorney at (609) 734-6820 to arrange a mutually convenient date and time for a telephonic interview.
        No fees are believed due with regard to this Amendment. Please charge any fee or credit any overpayment to Deposit Account No. **07-0832.**

                                        Respectfully submitted,
                                        Alexander Tourapis et al.

                        By: /Robert B. Levy/
                               Robert B. Levy
                               Attorney for Applicants
                               Reg. No. 28,234
                               Phone (609) 734-6820

Patent Operations
Thomson Licensing LLC
P.O. Box 5312
Princeton, New Jersey 08543-5312
December 31, 2010